

WHAT IS CLAIMED IS:

- 5 1. A radio terminal for supporting packet transmission, which comprises:
 a core;
 at least one first interface associated with the core for supporting radio
 transmission within a first frequency range over an associated first
 channel in accordance with a first transmission protocol;
10 at least one second interface associated with the core for independently
 supporting radio transmission within the first frequency range over an
 associated second channel in accordance with a second transmission
 protocol;
15 means associated with the core for receiving connection requests for
 packets to be transmitted;
 a selector coupled to the receiving means and operable between first
 and second modes for respectively routing the packets to a separate one
 of the first and second interfaces; and
 an interface manager responsive to each connection request for
 determining the operating mode of the selector in accordance with a
 selected transmission condition(s) on the first and second channels.
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25 2. A terminal as defined in claim 1, in which the first transmission protocol is the
 Bluetooth protocol.

30 3. A terminal as defined in claim 2, in which the second transmission protocol is
 the 802.11 protocol.

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4. A terminal as defined in claim 1, in which the selected transmission condition includes an indication of received signal strength on the respective first and second channels.
5. A terminal as defined in claim 1, in which the selected transmission condition includes an indication of transmission delays on the respective first and second channels.
- 10 6. A terminal as defined in claim 1, in which a selected one of a plurality of Bluebook access points and 802.11 access points are respectively connectable to the first and second interfaces through the first and second channels, and in which the selected transmission condition includes an indication of the usage levels of the access points respectively connectable to the first and second channels.
- 15 7. A terminal as defined in claim 1, in which the interface manager comprises, in combination, first means for collecting at first intervals, through the first interface, first samples representative of the selected transmission condition on the first channel, and second means for collecting at second intervals, through the second interface, second samples representative of the selected transmission condition on the second channel.
- 20 8. A terminal as defined in claim 7, in which the interface manager further comprises first and second means individually coupled to the first and second collecting means for locally storing, over separately selectable times, the respective first and second samples.
- 25 9. A terminal as defined in claim 8, in which the interface manager further comprises, in combination, first means for comparing a stored first sample with a reference metric to obtain a first indicator, second means for comparing a stored second sample with the reference metric to obtain a second indicator, and means responsive to each connection request for individually operating the selector in the
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first and second modes when the first indicator is greater and lesser, respectively, than the second indicator.

5 10. A terminal as defined in claim 9, further comprising means associated with the first and second comparing means and responsive to each connection request for adjusting the first and second indicators in accordance with selected criteria associated with the connection request.

10 11. In a radio transmission system having first and second channels separately configurable for the transmission of packets within a first frequency range in response to a connection request, the first and second channels supporting transmission in accordance with first and second transmission protocols:

15 means operable between first and second selectable modes for respectively routing the packets to be transmitted to a separate one of the first and second channels; and
means responsive to the connection request and coupled to the first and second channels for selecting the operating mode of the routing means in accordance with relative transmission condition(s) on such channels..

20 12. Apparatus as defined in claim 11, in which the first transmission protocol is the Blue tooth protocol.

25 13. Apparatus as defined in claim 12, in which the second transmission protocol is the 802.11 protocol.

14. A radio terminal for supporting packet transmission, which comprises:

30 a core;
at least one first interface associated with the core for supporting radio transmission within a first frequency range over an associated first channel in accordance with a first transmission protocol;

at least one second interface associated with the core for independently supporting radio transmission within the first frequency range over an associated second channel in accordance with a second transmission protocol;

- 5 means associated with the core for receiving connection requests for packets to be transmitted;
- a selector coupled to the receiving means and operable between first and second modes for respectively routing the packets to a separate one of the first and second interfaces;
- 10 first means for collecting through the first interface, at first intervals, first samples representative of a selected transmission condition(s) on the first channel;
- second means for collecting through the second interface, at second intervals, second samples representative of the selected transmission condition on the second channel;
- 15 first and second means individually coupled to the first and second interfaces for locally storing, over separately selectable times, the respective first and second samples;
- first means for comparing the then-stored first samples with a reference metric to generate a refreshable first indicator;
- 20 second means for comparing the then-stored second samples with the reference metric to generate a refreshable second indicator; and
- means responsive to the connection request for individually operating the selector in the first and second modes when the then-refreshed first indicator is greater and lesser, respectively, than the then-refreshed second indicator.

25 15. A terminal as defined in claim 14, in which the first transmission protocol is the Blue tooth protocol.

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16. A terminal as defined in claim 15, in which the second transmission protocol is the 802.11 protocol.